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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
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10/579,315

05/16/2006

Katie Rochester

06-362

8201

20306

7590

09/28/2010

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EXAMINER

FARAH, AHMED M

ART UNIT

PAPER NUMBER

3769

MAIL DATE

DELIVERY MODE

09/28/2010

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

|                              |                                      |   |  |
|------------------------------|--------------------------------------|---|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/579,315 | <b>Applicant(s)</b><br>ROCHESTER ET AL. |  |
|                              | <b>Examiner</b><br>Ahmed M. Farah    | <b>Art Unit</b><br>3769                 |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 3/1/2010.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-10, 12-21 and 23-34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10, 12-21, 23-34 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                    | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-10, 12-14 and 23-29 are again rejected under 35 U.S.C. 103(a) as being unpatentable over Biel Pub. No. US 2003/0009205 in view of Heeger et al. US Patent No. 5,408,109.

Biel discloses a phototherapy apparatus comprising: one or more flexible light emitting diode arrays formed on respective regions of a flexible substrate, and at least one or more light detectors formed on said substrate (see Fig. 4, and claims 25).

With respect to claims 6-8, Biel teaches the treatment light has a wavelength between 450 nm-850 nm (see claim 36). This wavelength range encompasses the claimed wavelength ranges.

With respect to claims 12-14, he teaches the flexible substrate further comprises adhesive element for securing the substrate to the treatment site (see claim 33).

Although Biel teaches the phototherapy device (including the LEDs and the flexible substrate) is flexible, he does not specifically teach the LEDs are flexible. He further fails to teach the use of organic light emitting diodes (OLEDs). However, the use of flexible light emitting diodes, such as OLEDs to provide optical energy is known in the

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art. Heeger et al. teach the use of light emitting diodes made of flexible organic substrate for generating optical energy. Therefore, at the time of the applicant's invention, it would have been obvious to one of ordinary skill in the art to modify Biel in view of Heeger et al. and use flexible OLEDs as equivalent alternative light sources to provide the therapeutic treatment energy as claimed.

Claims 15-21 and 32-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Biel and Heeger et al. as applied to claims 1-14 and 23-29 above, and further in view of Bazan et al. Pub. No. US 2005/0035346 and Lai US Patent No. 6,210,401.

With respect to claim 15, Biel does not teach the use of triplet emitter LEDs. However, the use of triplet emitting LEDs is known in the art. Bazan et al. disclose the use of triplet emitting LEDs. Therefore, at the time of the applicant's invention, it would have been obvious to one of ordinary skill in the art to modify Biel in view of Bazan et al. and use triplet emitting LEDs as an alternative light sources.

With respect to claims 16-21 and 32-34 Biel further fails to teach the use of wavelength converter(s). However, the use of wavelength converter is also known in the art. Lai discloses alternative light therapy device comprising a wavelength converter, such as grating, prisms, etc. (see Figs. 5a and 5B). Therefore, at the time of the applicant's invention, it would have been obvious to one of ordinary skill in the art to modify Biel in view of Lai to use wavelength a converter, such as grating, prisms, etc. to modify the output wavelength of the treatment energy as claimed.

***Response to Arguments***

Applicant's arguments filed on March 2, 2010 have been fully considered but they are not persuasive. The applicant makes the following arguments:

The applicant argues that the prior art of record fails to teach at least one important limitations of the claimed invention such as flexible photo-detectors, photo-detectors formed on a flexible substrate, or the formation of flexible LEDs and/or photo-detectors upon a flexible substrate as recited in independent claim 1. The applicant further cites sections of the Biel reference to support his/her argument. In particular, the applicant states that Biel teaches that the VCSEL, LEDs, and the optical fibers are “disposed in an array and adhere or mounted within a substrate.” Hence, the applicant states that the prior art of record, alone or in combination, fails to teach flexible light sources and light detectors that are “formed upon the [flexible] substrate itself” as required in independent claim 1.

In response to these arguments, the examiner agrees with the applicant that the prior art of record teaches light emitting diodes and/or photo-detectors disposed on a flexible substrate. The examiner further agrees with applicant that the prior art of record does not teach that the light emitting diodes and/or photo-detectors are formed from the flexible substrate itself as argued by the applicant. However, independent claim 1 of the instant application fails to teach that both the light emitting diodes and the photo-detectors are formed upon the flexible substrate itself as argued. Hence, the examiner maintains his rejections of the claims under the prior art of record.

***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ahmed M. Farah whose telephone number is 5712724765. The examiner can normally be reached on Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Henry Johnson can be reached on 5712724768. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

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you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ahmed M Farah/  
Primary Examiner, Art Unit 3769

June 7, 2010.